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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
			EXAMINER NORDMEYER, PATRICIA L	
			ART UNIT 1772	PAPER NUMBER

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/934,031	Applicant(s) ERICKSEN, MARY A.	
	Examiner Patricia L. Nordmeyer	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-8,10-13,15-28,30-33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-13,15-28,30-33 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>11</u> | 6) <input type="checkbox"/> Other:  |

## **DETAILED ACTION**

### ***Withdrawn Rejections***

1. The 102 rejection of claims 1, 2 and 6 – 8 as anticipated by May are withdrawn due to Applicant's amendments in Paper #10.

2. The 102 rejection of claims 10 – 13 as anticipated by Yoshitaka are withdrawn due to Applicant's amendments in Paper #10.

3. The 103 rejection of claims 4, 6 – 8, 23 – 28, 30 and 31 – 33 over May in view of Yoshitaka are withdrawn due to Applicant's amendments in Paper #10.

4. The 103 rejection of claims 1 – 2, 4 – 8, 23 – 28, 30 and 31 – 33 over Yoshitaka in view of Carte et al. are withdrawn due to Applicant's amendments in Paper #10.

### ***New Rejections***

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claim 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Hokushin KK (JP 3-193440).

Hokushin teaches a foam backing having a first side and a second side (Figure 2 and Page 4 of translation, line 30 – 37) having a layer of reflective glass beads on the front, first, side of the foamed layer (Page 4 of translation, lines 3 – 4) where the beads are held in by melting, softening, the foam layer and embedding the beads into the surface (Page 4 of translation, lines 30 – 37).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2 and 4 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carte et al. (USPN 5,947,917) in view of Lightle et al. (USPN 5,128,804).

Carte et al. disclose a foam (Column 2, lines 64 – 67) or non-woven backing material (Column 3, lines 44 – 52) in a medical tape (Column 3, lines 31 – 34) with a pressure sensitive adhesive coated on one of the sides of the backing material (Column 3, lines 25 – 28 and Column 5, lines 33 – 41). However, Carte et al. fail to disclose the layer of retroreflective beads is substantially held in place in the non-adhesive side of the tape without the use of an additional adhesive or resin.

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Lightle et al. teaches a layer of retroreflective beads that are embedded into a layer by heating and applying pressure to the layer to secure the beads (Column 2, lines 61 – 64), and the beads are coated with a layer of aluminum (Column 4, lines 49 – 65) in a retroreflective sheeting for the purpose of making a material that has a level of retroreflective brightness over a wide range of angles.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a layer of retroreflective beads with a aluminum coating that are embedded in a surface in Hokushin in order to make material that has a level of retroreflective brightness over a wide range of angles as taught by Lightle et al.

One of ordinary skill in the art would have recognized the claimed retroreflective article would have a reflective brightness of the beads would be greater than 70 or 90% after 750 or 5,000 abrasion cycles since both May and Yoshitaka teach foam articles with glass beads embedded in the surface. Therefore, one of ordinary skill in the art would have readily determined the optimum reflective brightness after the abrasion cycles depending on the end desired results in the absence of unexpected results.

9. Claims 1, 2, 4, 6 – 8 and 35 - 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (USPN 4,648,689) in view of Hokushin KK (JP 3-193440).

May discloses a tape with an adhesive side (Figure 2, #3 and Column 3, lines 38 – 39)

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and a non-adhesive side (Figure 1, #4) where the adhesive is a pressure sensitive adhesive (Column 5, lines 13 – 18) which sticks to the surface to which it is applied (Column 5, lines 19 – 24). The tape is formed from a closed-cell cross-linked foam material chosen from a variety of materials including polyurethane, silicone rubber, ethylene propylene diene terpolymer or neoprene (Column 3, lines 34 – 37). A layer of reflective microspheres, glass beads with an aluminum coating (Column 3, lines 47 – 49), are attached to the non-adhesive side of the tape by embedding the spheres in the surface of a polymeric sheet (Column 3, lines 44 – 47). However, May fails to disclose the layer of retroreflective beads is substantially held in place in the non-adhesive side of the tape without the use of an additional adhesive or resin.

Hokushin teaches a foam backing having a first side and a second side (Figure 2 and Page 4 of translation, line 30 – 37) having a layer of reflective glass beads on the front, first, side of the foamed layer (Page 4 of translation, lines 3 – 4) where the beads are held in by melting, softening, the foam layer and embedding the beads into the surface (Page 4 of translation, lines 30 – 37) for the purpose of getting a better adhesion of the beads to the surface so that they do not fall off.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a layer of retroreflective beads with a aluminum coating that are embedded in a surface in May in order to get a better adhesion of the beads to the surface so that they do not fall off as taught by Hokushin.

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One of ordinary skill in the art would have recognized the claimed retroreflective article would have a reflective brightness of the beads would be greater than 70 or 90% after 750 or 5,000 abrasion cycles since both May and Hokushin teach foam articles with glass beads embedded in the surface. Therefore, one of ordinary skill in the art would have readily determined the optimum reflective brightness after the abrasion cycles depending on the end desired results in the absence of unexpected results.

10. Claims 10 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokushin JP 3-193440) in view of Lightle et al. (USPN 5,128,804).

Hokushin teaches a foam backing having a first side and a second side (Figure 2 and Page 4 of translation, line 30 – 37) having a layer of reflective glass beads on the front, first, side of the foamed layer (Page 4 of translation, lines 3 – 4) where the beads are held in by melting, softening, the foam layer and embedding the beads into the surface (Page 4 of translation, lines 30 – 37). However, Hokushin fails to disclose the layer of retroreflective beads being coated by a layer of aluminum.

Lightle et al. teaches a layer of retroreflective beads that are embedded into a layer by heating and applying pressure to the layer to secure the beads (Column 2, lines 61 – 64), and the beads are coated with a layer of aluminum (Column 4, lines 49 – 65) in a retroreflective sheeting for the purpose of making a material that has a level of retroreflective brightness over a wide range of angles.

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It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a layer of retroreflective beads with a aluminum coating that are embedded in a surface in Hokushin in order to make material that has a level of retroreflective brightness over a wide range of angles as taught by Lightle et al.

One of ordinary skill in the art would have recognized the claimed retroreflective article would have a reflective brightness of the beads would be greater than 70 or 90% after 750 or 5,000 abrasion cycles since both May and Yoshitaka teach foam articles with glass beads embedded in the surface. Therefore, one of ordinary skill in the art would have readily determined the optimum reflective brightness after the abrasion cycles depending on the end desired results in the absence of unexpected results.

11. Claims 23 – 28 and 30 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (USPN 4,648,689) in view of Hokushin KK (JP 3-193440) and further in view of Lightle et al. (USPN 5,128,804).

May, as modified with Hokushin, discloses the claimed invention made with retroreflective beads except for the retroreflective beads having a coating of aluminum.

Lightle et al. teaches a layer of retroreflective beads that are embedded into a layer by heating and applying pressure to the layer to secure the beads (Column 2, lines 61 – 64), and the beads are coated with a layer of aluminum (Column 4, lines 49 – 65) in a retroreflective sheeting



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for the purpose of making a material that has a level of retroreflective brightness over a wide range of angles.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a layer of retroreflective beads with a aluminum coating that are embedded in a surface in the modified May in order to make material that has a level of retroreflective brightness over a wide range of angles as taught by Lightle et al.

One of ordinary skill in the art would have recognized the claimed retroreflective article would have a reflective brightness of the beads would be greater than 70 or 90% after 750 or 5,000 abrasion cycles since both May and Yoshitaka teach foam articles with glass beads embedded in the surface. Therefore, one of ordinary skill in the art would have readily determined the optimum reflective brightness after the abrasion cycles depending on the end desired results in the absence of unexpected results.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Since May teaches

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a tape with an adhesive side and Yoshitaka teaches a sheet with adhesive side, the structural limitations of the claimed invention are met.

Regarding coating the first side with a pressure sensitive adhesive, covering the second side with retro reflective beads, applying heat and pressure to embed the beads into the second side of the foam and laminating the beads to the second side in claims 24 and 25, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113. In this case, the limitation of coating, cover and applying heat and pressure are methods of production and therefore do not determine the patentability of the product itself. Process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974).

### ***Response to Arguments***

12. Applicant's arguments, see Paper #10, filed September 9, 2003, with respect to the rejection(s) of claim(s) 1-2 and 6 - 8 under May have been fully considered and are persuasive.

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Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made with Carte et al. in view Lightle et al.

13. Applicant's arguments, see Paper #10, filed September 9, 2003, with respect to the rejection(s) of claim(s) 10 – 13 under Yoshitaka have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made with Hokushin in view Lightle et al.

14. Applicant's arguments, see Paper #10, filed September 9, 2003, with respect to the rejection(s) of claim(s) 4, 6 – 8, 23 – 28 and 30 – 33 under May in view of Yoshitaka have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made with May in view of Hokushin KK and further in view of Lightle et al.

15. Applicant's arguments with respect to claims 1 – 2, 4 – 8, 23 – 28 and 30 – 33 rejected over Yoshitaka in view of Carte et al. have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (703) 306-

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5480. The examiner can normally be reached on Mon.-Thurs. from 7:00-4:30 & alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (703) 308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Patricia L. Nordmeyer  
Examiner  
Art Unit 1772

*pln*  
pln

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

10/9/03